

REMARKS

Remaining Claims

Claim 1 has been amended to more clearly point out and distinctly claim the invention. Eight (8) claims (Claims 1 - 3 and 5 - 9) remain pending in this application through this Amendment.

Rejections under 35 U.S.C. §102/§103

Claims 1-3 and 5-9 were rejected under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Valint, Jr. et al. (U.S. 5,981,675). For the following reasons, the Examiner's rejection over claims 1-3 and 5-9 is respectfully traversed.

Applicants' invention as currently claimed is not anticipated by nor obvious in light of the cited reference (the '675 patent), because the cited reference does not disclose nor suggest all of the claim limitations. As stated in the MPEP at 706.02(j), to establish a prima facie case of obviousness the "prior art reference (or references combined) must teach or suggest all the claim limitations."

The '675 patent does not disclose or suggest anything about the prepolymer of the invention as currently claimed, and in fact, teaches away from the invention.

First, the '675 patent is related to a "**low water siloxane macromer**" (Abstract; paragraph bridging col. 1 and col. 2) and to non-hydrogels, i.e., "low water" silicone-containing material made from the copolymerization of the **low water siloxane macromer** and an ethylenically unsaturated silicone-containing monomer (col. 1, lines 9-11, Summary of the Invention). As clearly stated by the inventors of the '675 patent, "low water silicone materials, as their name suggest, do not absorb or retain appreciable amounts of water, e.g. less than about 5 weight percent, and more typically less than about 1 or 2 weight percent." (col. 1, lines 32-35). In contrast, the present invention is related to a prepolymer which can be crosslinked to form a polymeric material capable of forming a hydrogel when contacted with water (see Examples). As stated by the cited reference (col. 1, lines 11-16), a hydrogel is well known in the art to constitute a polymeric material which can absorb and retain water in an equilibrium state and generally has a water content greater than about 5 weight percent and more commonly between about 10 to about 80 weight percent. Thus, a prepolymer of the invention is different from the **low water siloxane macromer** of the '675 patent.

Second, according to the teachings of the '675 patent, no claimed crosslinker with two unsaturated groups was used to prepare macromers at issue. In the '675 patent, **silicone containing macromers, (X)(E)_n**, "are prepared by, first, copolymerizing by free radical polymerization a mixture of the ethylenically unsaturated silicon-containing monomer (a), the ethylenically unsaturated monomer containing an active hydrogen atom (b) and the ethylenically unsaturated monomer (c) (if present), in the presence of the chain transfer agent (d).

Subsequently, this copolymer is reacted with a suitable ethylenically unsaturated radical to form a macromonomer of the copolymer having the ethylenically unsaturated radical E.” (col. 3, lines 11-22). But, the ‘675 patent does not disclose nor suggest anything about a **crosslinker** with two or more ethylenically unsaturated groups being one of the components in the copolymerization mixture for preparing **silicone containing macromers, (X)(E)_n**. It is true that the ‘675 patent discloses difunctional, ethylenically “end capped” siloxane-containing monomers represented by formula III. However, in the context of teaching of use of such monomers of formula III, Valint et al. was specifically teaching about difunctional, ethylenically “end capped” siloxane-containing monomers of formula III being used as **component (B)** in the copolymerization with **silicone containing macromers, (X)(E)_n** (col. 5, lines 14-45) to form a low water silicone material (here it is NOT a macromer but a crosslinked polymer). There is no teaching about use of siloxane-containing monomers of formula III in preparing **silicone containing macromers, (X)(E)_n**, at issue. In fact, the ‘675 patent, as a whole, teaches not using such type of siloxane-containing monomers of formula III. See, for example, col. 3, lines 24-30

The ethylenically unsaturated silicon-containing monomer (a) used as a comonomer for copolymer (X) may include silicone-containing monomers known in the contact lens art. However, this silicon-containing monomer is **preferably monofunctional**, i.e., including **only one ethylenically unsaturated radical**. Most preferred are known bulky polysiloxanylalkyl (meth)acrylic monomers represented by Formula (II): [emphasis added]

Thus, the ‘675 patent fails to teach or disclose anything about a claimed crosslinker with two unsaturated groups which is used to prepare a prepolymer or macromer.

Third, the resultant macromer of the ‘675 patent is hydrophobic (col. 4, lines 16-17). The meaning of the word “hydrophobic” is consistent with the meaning of the phrase “low water”, i.e., dislike water or unable to adsorb and retain water. In contrast, a prepolymer of the invention is hydrophilic because the prepolymer can be crosslinked (in the absence of any other monomers) to form a polymer that can have a water content of greater than 10 percent by weight when fully hydrated (see Examples). Thus, a prepolymer of the invention is different from the low water siloxane macromer of the ‘675 patent.

Fourth, macromers of the ‘675 patent are different from a prepolymer of the invention, because macromers of the ‘675 patent cannot be used as a sole crosslinkable material for making contact lenses. See, col. 5, lines 14-25:

For low water materials useful in soft contact lens applications, homopolymers of the Formula (I) macromonomers are not particularly effective because such materials will generally lack elasticity. Accordingly, the low water materials of the present invention for applications such as soft contact lenses are based on copolymers of the Formula (I) macromonomers and at least one silicone containing monomer (B). In other words, the low water silicone materials are prepared by polymerizing a mixture comprising a macromonomer of Formula (I) and an ethylenically unsaturated silicone-containing monomer other than the macromonomer of formula (I). [emphasis added]

In contrast, a silicone-containing prepolymer of the invention can be used, without additional comonomers, to prepare hydrogel contact lenses having a balanced ratio of water content, oxygen permeability and mechanical properties (Examples).

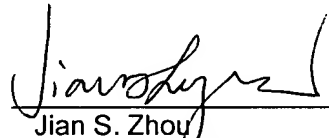
Therefore, because the '675 patent discloses and teaches a hydrophobic (low water) siloxane macromer totally different from a hydrophilic prepolymer of the invention, and because the '675 patent does not disclose nor suggest all of the limitations of the present invention, Applicants' invention is not anticipated by nor obvious in light of the '675 patent. Applicants respectfully request withdrawal of the rejections under 35 U.S.C. 102(b) and under 35 U.S.C. 103(a).

CONCLUSION

In view of the foregoing and in conclusion, Applicants submit that the rejections set-forth in the Office Action have been overcome, and that all pending claims are now in condition for allowance.

Should the Examiner believe that a discussion with Applicants' representative would further the prosecution of this application, the Examiner is respectfully invited to contact the undersigned. Please address all correspondence to Robert Gorman, CIBA Vision, Patent Department, 11460 Johns Creek Parkway, Duluth, GA 30097. The Commissioner is hereby authorized to charge any other fees which may be required under 37 C.F.R. §§1.16 and 1.17, or credit any overpayment, to Deposit Account No. 50-2965.

Respectfully submitted,



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